

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/750,576	Examiner: WHITE, Rodney Barnett
Filing Date: December 30, 2003	Group Art Unit: 3636
Inventor(s): MACHAEL, Jay R. et al.	Docket No.: 77012-325124
Title: CHAIR BACK REST WITH IMPROVED RESILIENCE AND SUPPORT	Client Ref. No.: 17-I-0198

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P. O. Box 1450
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APPEAL BRIEF

The Applicant filed a Notice of Appeal on November 22, 2010, from the Final Office Action dated May 25, 2010. The arguments in this brief are responsive to the status and disposition of the pending claims as represented by the Final Office Action mailed on May 25, 2010. This Appeal is proper because the present application includes claims that have either been twice rejected or finally rejected. The Appellants' Brief in support of this Appeal includes each section required by 37 C.F.R. §41.37.

The Applicant requests a five-month extension of time under 37 C.F.R. § 1.136. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 06-0029 and requested to notify us of the same.

I. REAL PARTY IN INTEREST

The real party in interest is HNI Corporation, the assignee of record.

II. RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences, which may be related to, directly affect or be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

The status of the claims is as follows:

Claims 3-5, 9-11, and 14-33 stand rejected.

Claims 3-5, 9-11, and 14-33 are under appeal.

IV. STATUS OF AMENDMENTS

The applicant has submitted no claim amendments subsequent to the Final Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER^{1,2}

Claim 18 recites a chair having a seat and a tiltable back (see, e.g., Page 2, lines 17-19). The tiltable back includes a rear support with a lumbar region that is defined by a curvature in the rear support that conforms generally to a user's lumbar region (see, e.g., Fig. 2, reference character 40). The tiltable back also includes a fluid containing cushion having

¹ The claims find support in multiple portions of the specification. As such, while particular portions of the specification are indicated as supporting the claimed subject matter, this should not be construed as limiting the scope of the claims to any particular embodiment or portion of the specification.

² The references to the specification refer to the specification as filed.

a seal along a top portion, a seal along a bottom portion, a seal along a left side portion and a seal along a right side portion (see, e.g., Page 5, lines 1- 3). The fluid containing cushion is located forward of the rear support (see, e.g., Page 4, lines 18- 20). The fluid containing cushion includes two layers that are sealed (see, e.g., Page 5, line 1) to form a vertically extending central chamber of generally constant width (see, e.g., Fig. 4, reference character 139) and vertically extending left and right side chambers (see, e.g., Fig. 4, reference character 138). The central chamber, the left side chamber, and the right side chamber are each completely sealed from one another (see, e.g., Page 9, lines 5-7).

Claim 30 recites a chair having a seat and a tiltable back (see, e.g., Page 2, lines 17-19). The tiltable back includes a rear support with a lumbar region that is defined by a curvature in the rear support that conforms generally to a user's lumbar region (see, e.g., Fig. 2, reference character 40). The tiltable back also includes a fluid containing cushion having a top portion, a bottom portion, a left side portion and a right side portion (see, e.g., Fig. 4, reference characters 136, 150, 152). The fluid containing cushion is located forward of the rear support (see, e.g., Page 4, lines 18- 20). The tiltable back also includes a cushion layer located forward of the fluid containing cushion (see, e.g., Page 4, lines 20-21) and an upholstery layer located forward of the cushion layer (see, e.g., Page 4, lines 20-21). The fluid containing cushion includes two layers that are sealed along a top portion, a bottom portion, a left side portion, and a right side portion (see, e.g., Page 5, lines 1- 3), and also includes a first and second straight vertical seams that attach the two layers (see, e.g., Page 9, lines 5-7). The first and second straight vertical seams extend from the top portion seal to the bottom portion seal to form a first completely sealed centrally located fluid chamber (see, e.g., Page 9, lines 5-7). The fluid containing cushion induces a third vertical seam that extends from the top portion seal toward the bottom portion seal to form second and third side chambers that are in fluid communication with each other but not with the first chamber (see, e.g., Fig. 4, reference character 137). The fluid containing cushion further includes a fourth vertical seam that extends from the top portion seal toward the bottom portion seal to

form a fourth and fifth side chambers that are in fluid communication with each other but not with the first chamber (see, e.g., Fig. 4, reference character 137).

Claim 33 recites a chair having a seat and a tiltable back (see, e.g., Page 2, lines 17-19). The tiltable back includes a rear support with a lumbar region that is defined by a curvature in the rear support that conforms generally to a user's lumbar region (see, e.g., Fig. 2, reference character 40). The tiltable back also includes a fluid containing cushion having a seal along a top portion, a seal along a bottom portion, a seal along a left side portion and a seal along a right side portion (see, e.g., Page 5, lines 1- 3). The fluid containing cushion is located forward of the rear support (see, e.g., Page 4, lines 18- 20). The tiltable back includes a fluid that at least partially fills the fluid containing cushion (see, e.g., page 3, line 10). The fluid containing cushion includes two layers that are sealed (see, e.g., Page 5, line 1) to form a vertically extending central chamber of generally constant width (see, e.g., Fig. 4, reference character 139) and vertically extending left and right side chambers (see, e.g., Fig. 4, reference character 138). The central chamber, the left side chamber, and the right side chamber are each completely sealed from one another (see, e.g., Page 9, lines 5-7). The tiltable back is configured so that the fluid in the fluid containing cushion at least partially shifts away from a first region where a back or shoulder of the user contacts the fluid containing cushion toward a second region where a lumbar area of the user contacts the fluid containing cushion when the user reclines the tiltable back (see, e.g., Page 3, lines 10-14).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Ground of Rejection 1: Whether claims 18, 3-6, 9-11, 14, 20-22, 28, 30-31, and 33 are unpatentable under 35 U.S.C. § 103(a) over FR 2,557,441 ("Catelas") in view of U.S. Patent Application Publication No. 2004/0232756 ("Lin") and U.S. Patent No. 6,616,228 ("Heidmann").

Ground of Rejection 2: Whether claims 20 and 24-26 are unpatentable under 35 U.S.C. § 103(a) over Catelas in view of Lin and Heidmann, and further in view of U.S. Patent No. 6,135,551 (“Linder”).

Ground of Rejection 3: Whether claim 23 is unpatentable under 35 U.S.C. § 103(a) over Catelas in view of Lin and Heidmann, and further in view of U.S. Patent No. 5,369,829 (“Jay”).

Ground of Rejection 4: Whether claims 29 and 32 are unpatentable under 35 U.S.C. § 103(a) over Catelas in view of Lin and Heidmann, and further in view of U.S. Patent No. 5,634,685 (“Herring”) and U.S. Patent No. 6,241,320 (“Chew”).

VII. ARGUMENT

Ground of Rejection 1

Claims 18, 3-6, 9-11, 14, 20-22, 28, 30-31, and 33

The Office improperly rejected claims 18, 3-6, 9-11, 14, 20-22, 28, 30-31, and 33 under 35 U.S.C. § 103(a) as obvious over Catelas, Lin, and Heidmann. Claim 18 recites (emphasis added):

1. A chair having a seat and a tiltable back, said back comprising:
a rear support including a lumbar region defined by a curvature in the rear support, wherein the curvature conforms generally to a user’s lumbar region;
a fluid containing cushion having a seal along a top portion, a seal along a bottom portion, a seal along a left side portion and a seal along a right side portion, said fluid containing cushion located forward of said rear support; wherein
said fluid containing cushion includes two layers sealed to form **a vertically extending central chamber of generally constant width** and vertically extending left and right side chambers, each of said chambers being completely sealed from one another.

Claim 30 recites (emphasis added):

30. A chair having a seat and a tiltable back, said back comprising:
a rear support including a lumbar region defined by a curvature in the rear support,
wherein the curvature conforms generally to a user's lumbar region;
a fluid containing cushion having a top portion, a bottom portion, a left side portion
and a right side portion, said fluid containing cushion located forward of said rear support;
a cushion layer located forward of said fluid containing cushion; and
an upholstery layer located forward of said cushion layer; wherein
said fluid containing cushion includes two layers sealed along a top portion, a bottom
portion, a left side portion and a right side portion, **first and second straight vertical seams**
attaching said two layers, said first and second vertical seals extending from the top portion
seal to the bottom portion seal to form a first completely sealed centrally located fluid
chamber, a third vertical seam extending from the top portion seal toward the bottom portion
seal to form second and third side chambers, said second and third side chambers being in
fluid communication with each other but not with said first chamber, and a fourth vertical
seam extending from the top portion seal toward the bottom portion seal to form fourth and
fifth side chambers, said fourth and fifth side chambers being in fluid communication with
each other but not with said first chamber.

Claim 33 recites (with emphasis added):

33. A chair having a seat and a tiltable back, said back comprising:
a rear support including a lumbar region defined by a curvature in the rear support,
wherein the curvature conforms generally to a lumbar region of a user;
a fluid containing cushion having a seal along a top portion, a seal along a bottom
portion, a seal along a left side portion and a seal along a right side portion, said fluid
containing cushion located forward of said rear support; and
fluid, wherein the fluid at least partially fills the fluid containing cushion, wherein the
fluid containing cushion includes two layers sealed to form **a vertically extending central
chamber of generally constant width** and vertically extending left and right side chambers,

each of said chambers being completely sealed from one another, and wherein as the user reclines the tiltable back, the fluid in the fluid containing cushion at least partially shifts away from a first region where a back or shoulder of the user contacts the fluid containing cushion toward a second region where a lumbar area of the user contacts the fluid containing cushion.

Claims 18 and 30 are not obvious over the cited references

The Office bears the burden of presenting at least a prima facie case of anticipation. *See In re King*, 801 F. 2d 1324, 1327 (Fed. Cir. 1986). The Office has not carried that burden for at least the following reasons.

First, the Office has not established that all the references are analogous to the claimed invention. *See In re Klein*, No. 2010-1411, at 7 (Fed. Cir. 2011) (“A reference qualifies as prior art for an obviousness determination under § 103 **only when it is analogous to the claimed invention.**”) (emphasis added). The claimed invention relates to tiltable chair backs with lumbar support, *see, e.g.*, paragraph [0006], and all three independent claims recite a fluid containing cushion on a tiltable back. Lin, in contrast, relates to a pad structure for a baby stroller. Baby stroller pads are not reclined by their users, nor does stroller pad design typically include any consideration for lumbar support. Baby stroller pads serve a completely different purpose, and perform a completely different function, when compared with tiltable chair backs with lumbar support. In addition, Lin is not “reasonably pertinent to the particular problem with which the inventor is involved.” *In re Klein*, at 7. Specifically, the baby stroller in Lin does not have a tiltable back, and thus cannot “have commended itself to an inventor’s attention” in considering self-adjusting support on a tiltable back. *Id.* In other words, Lin is “directed to a wholly different problem.” *Id.* at 7, 8. Because Lin cannot be considered to be analogous to the claimed invention, the Office Action’s rejections should be reversed. *See id.* at 16.

Second, even if one of ordinary skill in the art of reclining chair design were, by happenstance, to stumble upon the Lin reference, he or she would not have thought to combine any of its teachings with Catelas or Heidmann, because applying the teachings of either Catelas or Heidmann to the Lin pad structure would render the Lin pad structure unsatisfactory for its intended purpose. *See In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984); MPEP §2143.01(V); *cf. KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007) (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”). Lin recommends the addition of “hot pressed points 26 ... so that the surface of the airways 24 can get an effect of being flat and tidy to avoid raising of the central areas of the airways 24 by overlarge length of airways 24 to induce unflatness and untidiness of the surface of the pad structure that may influence coziness provided by the pad structure.” Lin, paragraph [0025]. Thus, Lin actually teaches away from a bulging and/or fluid shifting pocket as Catelas appears to show (*see* Catelas Figs. 3-4), because such bulging and/or fluid shifting would induce “unflatness and untidiness of the surface of the pad structure.”

Third, even if Lin is analogous art and could be combined with Catelas and Heidmann (which the Applicant respectfully asserts is not true), the references fail to teach or suggest each and every claimed element. For example, claim 30 recites “first and second straight vertical seams attaching said two layers.” While the Office asserts that “there is not mention of the seams being ‘straight’” in claim 30, Final Office Action, page 7, claim 30 does in fact affirmatively recite “straight vertical seams.”

In addition, claims 18 and 33 recite “a vertically extending central chamber of generally constant width.” The Office contends that Lin discloses that feature. Lin describes two dividers that create a middle section (211 and 212) – yet those dividers are not straight vertical seams and do not create a vertically extending central chamber of generally constant width. On the following page are reproductions of Fig. 4 of Lin and Fig. 4 of the present application:

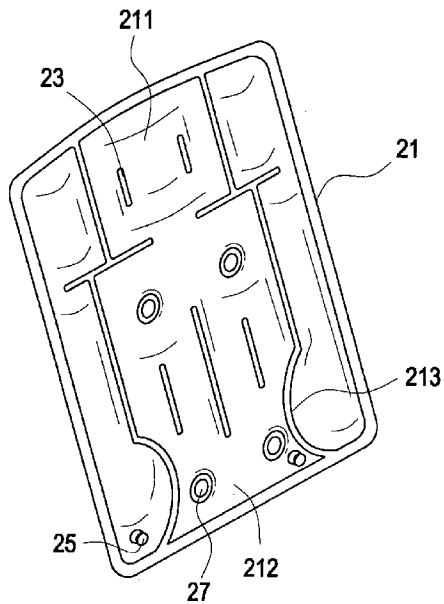
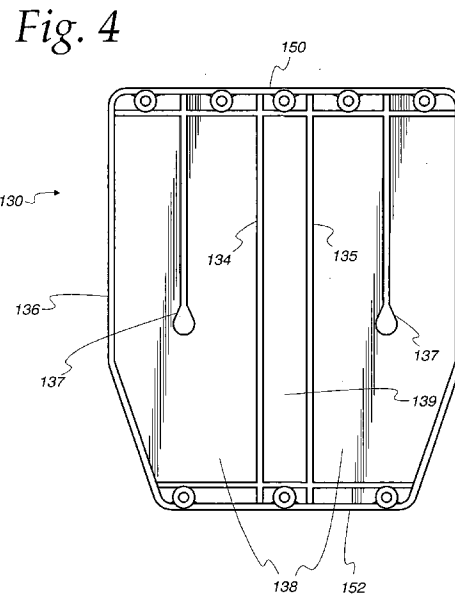


Fig. 4 of Lin



Present Application

As described at paragraph [0024] of Lin, the Lin backrest pad 21 achieves different functions along its different vertical locations, so one of ordinary skill in the art would not have thought to make section 212 of generally constant width or to use straight vertical seams. In particular, Lin states that the dividers create a “head leaning section” to prevent movement of a baby’s head, as well as a “waist leaning section” that is “made according to human body engineering, so that the baby can be cozier in seating.” Lin, paragraph [0024]. Because the functions performed by the head leaning section and the waist leaning section require chambers of different dimensions, Lin does not teach or suggest either “a chamber of generally constant width” or “straight vertical seams.” Thus, at least those claimed features are absent from the identified references, and none of the identified references provide any guidance, suggestion, or apparent reason for incorporating such features. In sum, no combination of the identified references provides all the features of claims 18, 30, and 33, and there is no apparent reason for modifying the identified references to address such features; therefore, claims 18, 30, and 33 are not rendered obvious by the identified references.

For at least those reasons discussed above, the Office Action's rejections of claims 18, 30, and 33 should be reversed. Likewise, the rejections of those claims that depend from and include each and every limitation of either claim 18, 30, or 33 should also be reversed.

Ground of Rejection 2

Claims 20 and 24-26

The Office improperly rejected claims 20 and 24-26 under 35 U.S.C. § 103(a) over Catelas, Lin, and Heidmann, in view of Linder. Those claims depend from and include every limitation of claim 18, and therefore these rejections should be reversed at least for the reasons discussed above. Moreover, Linder, like Lin, is not analogous to the claimed invention. Linder relates to an "inflatable chair" that cannot be reclined by its user, nor does that inflatable chair include any consideration for lumbar support. In fact, Linder states that the top panel (40) is "welded" to a set of braces (54) that are welded to the bottom panel (44), or that the top panel may be directly welded to the bottom panel. Linder, col. 3, ll. 4-14. In other words, Linder is "directed to a wholly different problem." *In re Klien*, at 7, 8.

Ground of Rejection 3

Claim 23

The Office improperly rejected claim 23 under 35 U.S.C. § 103(a) over Catelas, Lin, and Heidmann, in view of Jay. That claim depends from and includes every limitation of claim 18, and therefore that rejection should be reversed at least for the reasons discussed above.

Ground of Rejection 4

Claims 29 and 32

The Office improperly rejected claims 29 and 32 under 35 U.S.C. § 103(a) over Catelas, Lin, and Heidmann, in view of Herring and Chew. Claim 29 depends from and includes every limitation of claim 18, and claim 32 depends from and includes every limitation of claim 30. Therefore, those rejections should be reversed for at least those

reasons discussed above. Moreover, neither Herring nor Chew are analogous to the claimed invention. Herring relates to an “inflatable/deflatable motorcycle seat cushion” and Chew discusses a “seat cushion.” Neither reference discusses a back that can be reclined by its user or any consideration for lumbar support. Those cushions serve a completely different purpose, and perform a completely different function, when compared with tiltable chair backs with lumbar support. In addition, neither Herring nor Chew are “reasonably pertinent to the particular problem with which the inventor is involved.” *In re Klein*, at 7. Because those cushions do not include a tiltable back, they cannot “have commended itself to an inventor’s attention” in considering self-adjusting support on a tiltable back. *Id.* In other words, Herring and Chew are “directed to a wholly different problem.” *Id.* at 7, 8.

VII. CONCLUSION

The Applicant respectfully requests that the Board reverse the outstanding rejections of the foregoing claims and instruct the Examiner to issue a Notice of Allowance of all pending claims.

Respectfully submitted,

FAEGRE & BENSON LLP

Dated: June 22, 2011

By: /Benjamin S. Fernandez/
Benjamin S. Fernandez
Reg. No. 55,172
303/607.3709
Customer No.: 35657

VIII. CLAIMS APPENDIX

1. (Canceled)
2. (Canceled)
3. (Previously Presented) The chair of claim 18 wherein said fluid containing cushion is hermetically sealed.
4. (Previously Presented) The chair of claim 18 wherein said fluid containing cushion is sized and dimensioned to be at least coextensive with the area of the user's lumbar region.
5. (Previously Presented) The chair of claim 18 wherein said fluid containing cushion has a lower region and an upper region, and said cushion comprises one or more channels extending between said lower region and said upper region.
6. (Original) The chair of claim 5 wherein said channels are substantially vertical.
7. (Canceled)
8. (Canceled)
9. (Previously Presented) The chair of claim 18 wherein said fluid containing cushion is made of one or more plastic films selected from the group consisting of vinyls, polyurethanes, polyvinyl chlorides, ethylene vinyl acetates, urethane coated membranes, polyolefins, sarans, and engineered multi-layer films.
10. (Previously Presented) The chair of claim 18 wherein said seals are formed by a method selected from the group consisting of heat sealing, ultrasonic sealing, RF sealing, and adhesives.
11. (Previously Presented) The chair of claim 18 wherein said fluid is selected from the group consisting of air, gas or gas mixtures, liquid, and flowable gel.

12. (Canceled)
13. (Canceled)
14. (Previously Presented) The chair of claim 18 wherein said cushion comprises a plurality of chambers extending from a lower region of the cushion to an upper region of the cushion.
15. (Canceled)
16. (Canceled)
17. (Canceled)
18. (Previously Presented) A chair having a seat and a tiltable back, said back comprising:
 - a rear support including a lumbar region defined by a curvature in the rear support, wherein the curvature conforms generally to a user's lumbar region;
 - a fluid containing cushion having a seal along a top portion, a seal along a bottom portion, a seal along a left side portion and a seal along a right side portion, said fluid containing cushion located forward of said rear support; wherein
 - said fluid containing cushion includes two layers sealed to form a vertically extending central chamber of generally constant width and vertically extending left and right side chambers, each of said chambers being completely sealed from one another.
19. (Previously Presented) The chair of claim 18 wherein:
 - said sealed central chamber extends between said top and bottom portions of said cushion between two spaced apart straight, vertically extending seams.
20. (Previously Presented) The chair of claim 19 wherein:
 - said left and right chambers extend between said top and bottom portions of said cushion.

21. (Previously Presented) The chair of claim 18 wherein:
 - said left side chamber is partially divided by a vertically directed seam; and
 - said right side chamber is partially divided by a vertically directed seam.
22. (Previously Presented) The chair of claim 21 wherein:
 - said left side chamber includes a middle seam extending from said seal along said top portion of said cushion; and
 - said right side chamber includes a middle seam extending from said seal along said top portion of said cushion.
23. (Previously Presented) The chair of claim 22 wherein:
 - said middle seam of said left chamber includes an enlarged lower end portion; and
 - said middle seam of said right chamber includes an enlarged lower end portion.
24. (Previously Presented) The chair of claim 23 wherein:
 - said sealed central chamber extends between said top and bottom portions of said cushion between two spaced apart vertically extending seams.
25. (Previously Presented) The chair of claim 24 wherein:
 - said left and right chambers extend between said top and bottom portions of said cushions.
26. (Previously Presented) The chair of claim 25 wherein:
 - said two layers of said fluid containing cushion are generally air impermeable.
27. (Previously Presented) The chair of claim 26 wherein:
 - each of said two layers of said fluid containing cushion includes multiple layers.
28. (Previously Presented) The chair of claim 18 wherein:
 - said two layers of said fluid containing cushion are generally air impermeable.
29. (Previously Presented) The chair of claim 28 wherein:
 - each of said two layers of said fluid containing cushion includes multiple layers.

30. (Previously Presented) A chair having a seat and a tiltable back, said back comprising:
- a rear support including a lumbar region defined by a curvature in the rear support, wherein the curvature conforms generally to a user's lumbar region;
 - a fluid containing cushion having a top portion, a bottom portion, a left side portion and a right side portion, said fluid containing cushion located forward of said rear support;
 - a cushion layer located forward of said fluid containing cushion; and
 - an upholstery layer located forward of said cushion layer; wherein
- said fluid containing cushion includes two layers sealed along a top portion, a bottom portion, a left side portion and a right side portion, first and second straight vertical seams attaching said two layers, said first and second vertical seals extending from the top portion seal to the bottom portion seal to form a first completely sealed centrally located fluid chamber, a third vertical seam extending from the top portion seal toward the bottom portion seal to form second and third side chambers, said second and third side chambers being in fluid communication with each other but not with said first chamber, and a fourth vertical seam extending from the top portion seal toward the bottom portion seal to form fourth and fifth side chambers, said fourth and fifth side chambers being in fluid communication with each other but not with said first chamber.
31. (Previously Presented) The chair of claim 30 wherein:
- said two layers of said fluid containing cushion are generally air impermeable.
32. (Previously Presented) The chair of claim 31 wherein:
- each of said two layers of said fluid containing cushion includes multiple layers.

33. (Previously Presented) A chair having a seat and a tiltable back, said back comprising:
- a rear support including a lumbar region defined by a curvature in the rear support, wherein the curvature conforms generally to a lumbar region of a user;
 - a fluid containing cushion having a seal along a top portion, a seal along a bottom portion, a seal along a left side portion and a seal along a right side portion, said fluid containing cushion located forward of said rear support; and
 - fluid, wherein the fluid at least partially fills the fluid containing cushion, wherein the fluid containing cushion includes two layers sealed to form a vertically extending central chamber of generally constant width and vertically extending left and right side chambers, each of said chambers being completely sealed from one another, and wherein as the user reclines the tiltable back, the fluid in the fluid containing cushion at least partially shifts away from a first region where a back or shoulder of the user contacts the fluid containing cushion toward a second region where a lumbar area of the user contacts the fluid containing cushion.

IX. EVIDENCE APPENDIX
None

X. RELATED PROCEEDINGS APPENDIX
None

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